

December 17, 2001 [ Number 221 ]

This issue contains the NIH Computer Center's holiday service schedule.

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*Cover Illustration*

## Major Articles

Web-Based Customer Support

Windows 2000 at NIH

New Groups—Desktop Support and Sponsors

“Ask TASC”—About Spam

Holiday Service Schedule

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*Interface* is a Web-based journal. You can receive notice of a new issue of *Interface Online* by joining the "Interface" list via the NIH Listserv [<http://list.nih.gov/archives/interface.html>]. You can receive information specific to the OS/390 systems by joining the "CIT-Titan-News" list [<http://list.nih.gov/archives/CIT-Titan-News.html>].

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**Http://www.nih.gov** is one of the most frequently visited federal government Web sites. *Forbes* magazine listed NIH's site as its favorite of the 33 "general health" Web sites reviewed earlier this year.

	<i>August</i>	<i>September</i>	<i>October</i>
Total hits for the month	36,952,486	33,210,026	48,845,120
Hits per day	1,192,015	1,107,000	1,575,649
Number of different individuals	418,766	379,667	430,918

Server has been up 100% for 526 consecutive days (as of December 17, 2001).

# Features

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## CIT Adds New Web-Based Customer Support Service— IT Help Is Available 24 x 7

Now you can take advantage of CIT's new online service and have expert IT help at your fingertips 24 hours a day. When it's after hours and you need IT customer support, you now have a place to go for answers. Maybe you want to change your password, or you have a question about your Parachute account, or you want to know how to change your desktop telephone service. In the past you had to wait until the next business day to get help. Not anymore. CIT's Technical Assistance and Support Center (TASC) has developed a powerful, new, online self-help service that users can access any time via the Customer Support Web site [<http://support.cit.nih.gov>].

The new Customer Support online service not only provides answers to basic IT questions using the CIT Knowledge Base, it also displays up-to-the-minute IT news and frequently-asked questions (FAQs). If none of these options provides the solution you need, you may submit an electronic "help" request ticket. (Customers can also submit tickets via the Web interface when TASC is open.) TASC will respond to all electronic requests the next business day. The new site even lets you review the status of your existing service calls online.

CIT's new EMERGENCY after-hours live telephone support service made its debut November 1. The new service is staffed from 6:00 P.M. to 7:00 A.M. and is intended for emergencies only. A call to the TASC help-line extension, GOCIT or (301) 594-6248, will give users the option of leaving a voice message for non-emergency issues, or speaking with the emergency on-call technician. If you leave a message, TASC will contact you the next business day. *Note:* TASC will be closed on December 24, December 25 and January 1, and will not offer live support on these days. The TASC holiday schedule appears in another article, "NIH Computer Center—Holiday Service Schedule," and on the new Customer Support Web site.

These innovations—which will speed delivery of problem solving resources to those who need it—are part of CIT's continuous efforts to improve support to its customers.



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## Windows 2000 and the NIH Active Directory

The transition to Windows 2000 marks the biggest change to Windows since it was first released in 1994. With Windows NT 4, having many independent domains linked with trust relationships worked reasonably well – there was no compelling reason for those domains to be linked into a centrally administered structure. In a Windows 2000 world, however, this is no longer true. The introduction of Active Directory (AD) – the directory service for the Windows 2000 Server – makes domain structures and the relationships between domains much more important. Active Directory is the foundation of Windows 2000 distributed networks – it stores information about objects on the network and makes this information easy for administrators and users to find and use.

Because of the changes in Windows 2000, the NIH Information Technology Management Committee (ITMC) convened a Windows 2000 working group to make initial recommendations on how to coordinate an Active Directory deployment at the NIH. The result was the ITMC decision to create a NIH Active Directory infrastructure for IC-based domains and to start a migration project to Active Directory.

The Windows 2000 working group meets every month to discuss issues related to the Active Directory architecture and its deployment. Before the end of the year, the working group plans to submit to ITMC a standards document that will finalize the requirements for NIH institute and center (IC) participation in the Active Directory. The document will also discuss creating an Active Directory community to manage the future growth and changes.

### Benefits of Active Directory

The Active Directory is an industry-standard LDAP-accessible directory. It is an optimized network service used by applications and network services to store and retrieve information about enterprise resources (e.g., users, computers, printers, servers, network servers). The Active Directory allows organizations to coordinate, manage, and share information about network resources and users while acting as the central authority for network security. Security is integrated with Active Directory through logon authentication and access control to objects in the directory. With a single network logon, administrators can manage directory data and organization throughout their network, and authorized network users can access resources anywhere on the network.

The benefits of upgrading from Windows NT domains to Windows 2000 Active Directory revolve mostly around coordinating security and reducing the dependence of applications that maintain their own directories. All of these benefits help to improve information accuracy and security, and to reduce information redundancy and costs associated with storing and managing information.

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## Deployment in Stages

The NIH Active Directory deployment project has three phases.

- **Phase One** (January-December 2001)  
The initial deployment of the NIH Active Directory infrastructure was approved by ITMC on the basis of recommendations from the NIH Windows 2000 working group. With the success of the initial deployment, the ITMC approved the upgrade of NIH domain Windows NT 4 servers and services to Windows 2000. During the summer, the NIH domain was converted to a pure Windows 2000 native mode domain. The remaining part of phase one is winding down with the conversion of NT network services to Windows 2000 network services, and the finalizing of Active Directory Architecture Standards by the Windows 2000 working group and ITMC.
- **Phase Two** (August 2001-Summer 2002)  
This phase began with the merging of Exchange 5.5 directories information with Windows 2000 account information. During this phase the NIH.GOV Active Directory domain will be modified to support distributed administration for the IC network administrators. ICs that run NIH Exchange sites are planning to join the NIH Active Directory as sub domains. CIT is also working with other NIH enterprise initiatives (e.g., NED, PKI, NIH Portal, and NBRSS) to integrate these services into the NIH Active Directory design. The initial goal of this phase is to get all NIH Exchange sites to begin their migration to Active Directory. Other goals include the selection of a commercial off the shelf (COTS) Web-based administration tool for distributed administration of the NIH.GOV domain. Once all Exchanges sites are upgraded to Active Directory, the NIH Central Exchange Service (CES) Exchange 2000 deployment will begin.
- **Phase Three** (Completed by Early 2003)  
This phase of deployment begins with the fine tuning of the NIH Active Directory to support Exchange 2000. This includes modifying code that synchronizes NIH directory services with the rest of the NIH and DHHS applications and directories. In this phase, CIT will address full integration of NIH domains.

## More Information

A new NIH Active Directory Web site – covering both technical and non-technical questions – will soon be available.

Further developments in the deployment of Active Directory at NIH will be announced in future issues of *Interface*.

If you have questions, please call TASC and ask to speak to someone on the Active Directory project team.



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## Annual Audit Confirms Security of Titan, South, and EOS Systems

Once again, the annual security audit of the NIH Computer Center systems—OS/390 (Titan, South) and Unix (EOS)—has confirmed that CIT provides a computing environment suitable for critical applications and highly sensitive data. Ernst & Young LLP, independent auditors, under the direction of the DHHS Office of Inspector General (OIG), conducted a SAS 70 “Type II” security audit of Titan, South, and EOS for the period from October 1, 2000, through September 30, 2001. The auditors found that CIT’s controls for all three are suitably designed, implemented, and managed to reasonably ensure that all security objectives are achieved.

SAS 70 is an auditing standard established by the American Institute of Certified Public Accountants. SAS 70 reviews verify that controls are in place as stated in the documentation for the system under review, and “Type II” indicates that the controls are actively challenged and tested by the auditor. Industry and government accept these standards as a means for assuring application owners that a service organization’s systems are operated to adequately protect sensitive information from unauthorized disclosure or modification.

The SAS 70 audit was conducted to verify that the following control objectives were met:

- access to production programs and data files of the applications hosted on CIT computers is restricted to authorized individuals and programs
- adequate consideration is given to minimize the effect of a disaster and intermittent disruptions on the processing of user data
- all changes to operating systems software are authorized, properly tested, reviewed, approved, documented, and implemented
- physical access—to the machine room housing the computers and operation of the computers and related processing equipment—is restricted to appropriately authorized personnel

The final SAS 70 Report is being reviewed by Ernst & Young management after which it will be forwarded to DHHS OIG. The final report is expected to be available in December. The report contains sufficient information to certify that Titan, South, and EOS are operated at DHHS Security Level 3.



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## Update on NBRSS—Configuration Phase to Begin

The NIH Business and Research Support System (NBRSS) now encompasses both the NIH Business System (NBS) and the Enterprise Human Resources and Payroll (EHRP) project.

### **NBS – Configuration Phase**

The NBS is concluding the design phase of the project, which encompasses the development of models for business processes in the functional areas of financial management, travel, service and supply fund, research and development contracts, acquisition and supply, and property. After months of weekly meetings, the NBS Functional Teams, in conjunction with their respective advisory groups, are finishing up the design, review, and approval of the future processes so they can forge ahead into the next phase of the project, configuration.

The configuration phase of the NBS comprises two Conference Room Pilots (CRP), which are controlled environments where the Oracle Application software and NIH workflow procedures will be configured and tested.

- **Conference Room Pilot—CRP1** (begun in November 2001)

The Functional Teams and Systems Integrator will work together, configuring the Oracle Application software to be consistent with the work processes developed in the Design Phase. The configured software will then be tested within each functional area. As configuration and testing proceed, the work processes may require modifications, and customization issues may emerge requiring review, evaluation, and decisions by the Administrative Management Systems Steering Committee.

- **Conference Room Pilot—CRP2** (scheduled to begin in February 2002)

The software will be further tested to ensure that all NBS functions are integrated. Interfaces between the various functions and between the Administrative Data Base (ADB) and NBS will be tested to verify their effectiveness, and system administration will be tested to evaluate cross-functional integration of workflow. Finally, data conversion and NBS and ADB interfaces will be fully tested using live data whenever feasible.

Financial Management will be the first module to go live with the new NBS system, and its rollout is scheduled for September of 2002.

### **EHRP**

The EHRP team has been actively engaged in activities to implement the EHRP at NIH. The team has focused on

- 
- collaborating with DHHS to implement the NIH component of the EHRP;
  - developing a project implementation plan;
  - working with CIT and the Human Resources (HR) and Equal Employment Opportunity (EEO) communities to prepare for the data migration to the new EHRP system; and
  - developing an approach for supporting the HR data requirements for the NIH HR Database (HRDB) and the NBS.

The team has recently installed DHHS's development version of the PeopleSoft product and is formulating plans for conducting a functional-fit analysis with participation from NIH EHRP stakeholders. The purpose of the functional-fit analysis is to evaluate where the DHHS-configured version of PeopleSoft meets ("fits") and does not meet ("gaps") NIH's business requirements. Where gaps are identified, solutions for addressing them will be proposed for consideration by the NIH EHRP stakeholders.

## More Information

A convenient way to learn more about the NBRSS project is via the Web page, *NBS Matters* [<http://nbs.nih.gov>]—look for the latest edition of *NBRSS Today*, the newsletter established to keep the NIH community abreast of NBRSS project activities.  
[[http://nbs.nih.gov/current\\_status/nbrss\\_today\\_october2001.pdf](http://nbs.nih.gov/current_status/nbrss_today_october2001.pdf)]

The NBRSS team encourages you to share the publication and Web address with your colleagues, staffs, and others who may be impacted by, or interested in, the NBRSS implementation. This is an opportunity to help ensure that your organizational needs are met.

Your questions and comments are most welcome. Please send them to Marina Gregory at [gregorym@mail.nih.gov](mailto:gregorym@mail.nih.gov) [[mailto: gregorym@mail.nih.gov](mailto:gregorym@mail.nih.gov)].



## New Interest Group—Desktop Support

The newest CIT interest group—Desktop Support—holds monthly "brown bag" seminars for desktop computer support professionals. These seminars will be of interest to anyone who is responsible for the setup, maintenance, and management of desktop computers, or for the support of desktop computer users (including onsite support and help-desk staff).

The purpose of the seminars is to achieve the highest quality desktop computer support—by keeping everyone current on the latest technologies, techniques and computer services. Each seminar will feature

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a scheduled presentation, as well as a group discussion of the issues and challenges that support professionals face in supporting the NIH community.

## **Subscribe to the “Desktop-L” List**

To receive meeting announcements — as well as last-minute changes in time and place — subscribe to the “Desktop-L” mailing list via the NIH Listserv [<http://list.nih.gov/archives/desktop-l.html>]. Any changes in date, time or place will be sent to the mailing list.

## **Past Topics**

The October seminar featured a presentation on Microsoft Office XP that included the results of CIT’s evaluation and lessons learned during NIGMS’s recent migration. People from many ICs attended the meeting, while others “attended” by means of a live webcast. Other topics covered in recent meetings have included:

- Wireless Ultra-Thin Client Application in ORS/VRP
- Building the Wireless Classroom in CIT
- DNST Network Operations Center and the Network Hotline
- Strategies for Dealing with the Difficult Customer
- NIH Videocasting Service and video-on-the-desktop support issues
- CIT’s Core Windows NT Services, including status of the Windows 2000 Server migration
- The role of NIH’s Information Systems Security Officer (ISSO) and security issues concerning computer disposal
- The ePolicy Orchestrator system for managing anti-virus client software
- System for automated inventory of desktop computers
- McAfee antivirus client software configuration
- Blackberry pager installation and configuration
- Windows 2000 Professional workstation configuration

For more information, please call TASC and ask to speak to the Desktop Support interest group leader.



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## A New Interest Group for Account Officials

Are you an account sponsor, a deregistration official or a Titan account official? Did you ever want to talk with someone about a vexing issue, but didn't know whom to call? Have an issue you think demands closer attention? If so read on. . . .

The Account Sponsor Interest Group (ASIG) has recently been created to provide an informal forum for discussion of issues important to sponsors, deregistration officials, and Titan account officials (e.g., billing coordinators, security coordinators). Occasionally, the group will have guest speakers on topics of interest to account officials.

The ASIG meets the first Monday of every month from 1:00 to 2:00 p.m. at Rockledge II, 9<sup>th</sup> floor conference center. The kick-off meeting focused on issues such as CIT billing, CIT UniNames, and sundry other Web Sponsor issues. The next meeting is scheduled for Monday, January 7, 2002.

We encourage members to suggest agenda items – an opportunity to call attention to important issues or to get your concerns addressed. Please send e-mail to [Tees@nih.gov](mailto:Tees@nih.gov).

### **Listserv List “ASIG-L”**

To receive meeting announcements – as well as last-minute changes in time and place – subscribe to the “ASIG-L” list via the NIH Listserv [<http://list/archives/asig-l.html>].

If you have questions about ASIG, please call TASC and ask for the ASIG leader.



## NIH Portal Adds Module for *Interface*

NIH portal users – who have personalized a “MyPage” to contain the tools and information they need – can get to *Interface* quickly via its own module.

“MyPage” provides access to NIH information (e.g., NIH Calendar of Events, shuttle bus schedule, CRISP database, ITAS) and external resources (e.g., local weather forecasts). This information is available to portal users via “modules” – mini-applications that provide access to disparate systems.

For more details about the NIH Portal, see “NIH Portal Provides Access to NIH Information – From a Single Web Page” in *Interface* 219 (June 25, 2001).

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## DHHS-Mandated Inventory of Information Technology Assets

In late September 2001, DHHS Secretary Tommy Thompson asked all operating divisions of the department to provide an inventory of all information technology (IT) assets by December 5. For this inventory, IT assets are defined as any NIH-owned network connected device, including personal computers, printers and servers.

To accomplish this inventory, DHHS specified that Peregrine Systems's InfraTools Network Discovery (IND) devices and AssetCenter be used to identify IT assets attached to networks, correlate information gathered, and provide reports to NIH and DHHS.

The IT inventory has two parts.

- **Scans of IT Assets**

IND devices scan specified network subnets in a controlled fashion and collect a small amount of data from each "asset" attached to the network *and* powered on. The devices collect the IP address and MAC address from each node (i.e., each desktop computer, each printer, each server). Next, an inquiry is sent to the nodes to find out if Simple Network Management Protocol (SNMP) is running. If *yes*, then SNMP will be used for extracting and downloading specific system data to the IND devices. If SNMP is not running, the inquiry ends there. Because scans will be done at specific intervals over a few days, the IND devices will provide a reasonably good listing of IT assets, with at least the IP addresses and manufacturers.

- **Collation of Data**

The second part of this inventory will be the collection of all the data from the IND devices into a database using Peregrine Systems, Inc.'s AssetCenter. AssetCenter is an asset management application that will collect IT inventory data from the IND devices via a software tool called "Connect.It!" Connect.It! will send a daily inquiry to each IND device and update the central database—the "NIH AssetCenter." The data will later be formatted for delivery to a central DHHS AssetCenter. Although there is only one "NIH AssetCenter" for this project, several ICs have their own AssetCenters, which will query the IND devices independently.

The first stage of this project is now complete. All of the network discovery IND devices have been delivered and installed, and the NIH AssetCenter for collating all NIH IT assets has been implemented. Inventory data has been gathered, collated, formatted and delivered to DHHS. The report to DHHS did not contain IP addresses and was not delivered electronically, for security reasons.

In the second stage of the project, some data cleansing activities will occur. Training on the IND devices and AssetCenter will be completed by December 19.

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Each IC had a representative in the NIH IND working group. CIT is coordinating the project for NIH, with the cooperation of NIH's Information Technology Management Committee infrastructure subcommittee. DSTI, Inc. is the project manager for DHHS.



## Recent Disaster Recovery Test

CIT's most recent disaster recovery test at the hot-site on November 1 and 2, 2001, was successful and provided useful experience for all participants. The first day was dedicated to the restoration of the Titan, South, and EOS environments at the hot site, and the second day was set aside for customer testing of application recovery procedures.

### Preparations by CIT

#### *Titan System*

CIT performed the first full restore of the Titan system. In the first test of the complete recovery procedures, the team encountered only minor problems that were easily rectified.

#### *South System*

During the restore of the South system, the team encountered problems restoring some South tapes. The team was able to work around the problem and will use this experience to enhance CIT disaster preparedness.

#### *EOS Systems*

CIT successfully restored the EOS environment and three customer databases onto one machine. CIT successfully restored the EOS environment and three customer databases. A limitation in the amount of available disk space required some changes in procedures.

### Testing by Customers

Customer testing on Titan, South, and EOS went smoothly with only minor glitches. Because their ISPF profiles were not on any of the volumes that were restored, some customers had problems logging into Titan. After the recovery team rectified the problem, customers could log on and completed their tests. One of our EOS customers had a very successful test, with a DHHS auditor from the Office of the Inspector General looking on. The customer successfully used CONNECT:Direct to test communications between the restored EOS and South systems.

### Tests in 2002

Disaster recovery tests at the hot-site are scheduled for March 27 and November 13.



## Revised—Rates for Fiscal Year 2002

The rates published in issue 220 of *Interface* (September 5, 2001) contained incorrect values.

This list of rates shows the revisions in ***bold italics***. The rates for CIT services for fiscal year 2002 became effective October 1, 2001. The overall charges to users in FY02 will be comparable to those in FY01. Changes in rates (e.g., increases, decreases) from FY01 — as well as new charges — are noted to the right of the FY02 rate.

The charges for CPU time shown below are based on a previous, slower processor model (9672 Generation 3). Since the current Generation 5 processors are twice as fast as the older ones (i.e., provide twice as much processing per second), the processing time *shown on job output* should be multiplied by two before applying the CPU time rate. The \$ figure on output is the approximate charge.

	FY 2002 Rate	Change
SOUTH SYSTEM (OS/390)		
Processing		
WYLBUR editing (per 9672G3 CPU second)	\$ .33	
TSO CPU time (per 9672G3 CPU second)	\$ .30	
Batch		
$\text{Charges} = .64 * C * (.0002 * R + 1) + .0000315 * I + T$ $\text{Discounted charge} = .32 * C * (.0002 * R + 1) + .00001575 * I + T$ $C = \text{CPU time in Generation 3 CPU seconds (9672G3)}$ $R = \text{region used up to 1536K}$ $I = \text{I/O used}$ $T = \text{number of assigned tapes and special tapes mounted}$		
Minimum charge (per batch job)	\$ .25	
IMS (per ENTER keystroke)	\$ .05	
Tape		
Library storage (per tape-month)	\$ 1.00	
Library removal (per tape)	\$ 15.00	
Disk		
<i>Data set storage (per MB-day)</i>	\$ <b>.011</b>	
<i>Dedicated disk per month</i>	\$ <b>2,050.00</b>	
Printing (per 1,000 lines)	\$ 1.00	
Microfiche		
Each original	\$ 2.00	+ \$ .40
Each duplicate	\$ .25	
Minimum charge per job	\$ 2.50	

	FY 2002 Rate	Change
Connect time (logon time)		
Wylbur (per hour)	\$ 1.00	
TSO (per hour)	\$ .90	
<b>Remote Job Entry</b>		
Setup fee for new RJE	\$ 100.00	
Dedicated line (per month)	CIT cost pass thru	
Switched line (per hour)	\$ 5.00	
<b>Discounts</b>		
Interactive and batch processing		
Workday sessions that start after 5:00 P.M. & end before 7:00 A.M.	50% discount	- 10%
All sessions that occur entirely on weekends	50% discount	- 10%
<b>DB2 Processing</b>		
0+ to 10 CPU seconds (per 9672G3 CPU second)	\$ .60	
11 to 25 CPU seconds (per 9672G3 CPU second)	\$ .44	
26 to 200 CPU seconds (per 9672G3 CPU second)	\$ .20	
Over 200 CPU seconds (per 9672G3 CPU second)	\$ .10	
<b>TITAN SYSTEM (OS/390)</b>		
Processing		
Batch CPU (per 9672G3 CPU second)	\$ .90	New
Batch I/O (SIO) (per 1,000)	\$ .15	New
Interactive CPU (per 9672G3 CPU second)	\$ 1.04	New
Interactive I/O (SIO) (per 1,000)	\$ .15	New
Disk storage (per MB-day)	\$ .045 <sup>1</sup>	New
Tape		
Tape mount	\$ .50	New
Library storage (per tape-day)	\$ .03	New
Printing		
Standard (per page)	\$ .06	New
Labels (per 1,000 lines)	\$ 1.15	New
Microfiche		
Each original	\$ 2.00	New
Each duplicate	\$ .25	New
Minimum charge per job	\$ 2.50	New

<sup>1</sup> Disk storage rates will be significantly reduced within FY2002 as part of transition to Titan.

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	<b>FY 2002 Rate</b>	<b>Change</b>
<b>Remote Job Entry</b>		
Setup fee for new RJE	\$ 100.00	New
Dedicated line (per month)	CIT cost pass thru	New
<b>Discounts</b>		
Interactive and batch processing		
Workday sessions that start after 5:00 P.M. & end before 7:00 A.M.	50% discount	New
All sessions that occur entirely on weekends	50% discount	New

Model 204 and ADABAS charged by CPU usage and I/O at either batch or interactive rate, as appropriate.

## SCIENTIFIC SYSTEMS

### Advanced Laboratory Workstation

User fee (per month)	\$ 22.00	
Disk storage (per MB-day)	\$ .0033	- \$ .0067
Machine fee (per month)	\$ 150.00	

### Helix Services

Helix user subscription fee (per month)	\$ 20.00	+ \$ 1.00
Disk storage (per MB-day)	\$ .0033	- \$ .0067

## MICROSOFT WINDOWS SERVICES

Server fees encompass hosting services only and do not include server hardware costs.  
Hardware requirements are addressed on a per customer basis to best meet customer needs.  
**All charges are monthly unless otherwise noted.**

### Server Fees

Dedicated Server		
Service - excludes hardware	\$ 1,325.00	- \$ 258.33
Storage - based on customer requirements		
Shared Server		
Service - includes 50 GB storage	\$ 584.00	New

### Application Hosting Fees

Setup fee for any application (one-time charge)	\$ 200.00	
Web hosting (per IIS site)	\$ 100.00	
Print service (annually, per queue, no server charge)	\$ 150.00	New

	FY 2002 Rate	Change
<b>MS SQL Services on Dedicated Server</b>		
First application DB (setup charge)	\$ 722.00	
First application DB	\$ 814.00	- \$ 381.67
Each additional application DB (setup charge)	\$ 181.00	
Each additional application DB	\$ 210.00	
<b>MS SQL Services on Shared Server</b>		
Setup charge (per database)	\$ 181.00	
Monthly charge (per database)	\$ 210.00	New
Disk storage, each 2 GB	\$ 30.00	New
<b>MISCELLANEOUS SERVICES</b>		
<b>Firewall Services for Applications</b>		
Setup charge	\$ 9,200.00	
Annual maintenance	\$ 1,400.00	
<b>ADSM (NBARS)</b>		
Storage (per file per month)	\$ .00075	
Transfer		
First GB	\$ 15.00	
Each GB thereafter	\$ 7.50	
Minimum transfer	\$ 3.00	
<b>SILK Web</b>		
Basic Server (storage=10MB, traffic=500MB)		
Server charge (per month)	\$ 60.00	
Password protection (per month)	\$ 10.00	
Secure sockets layer (SSL) (per month)	\$ 20.00	
Intermediate Server (storage=25MB, traffic=1000MB)		
Server charge (per month)	\$ 110.00	
Password protection (per month)	\$ 15.00	
Secure sockets layer (SSL) (per month)	\$ 35.00	
Advanced Server (storage=50MB, traffic=2000MB)		
Server charge (per month)	\$ 200.00	
Password protection (per month)	\$ 20.00	
Secure sockets layer (SSL) (per month)	\$ 50.00	
<b>Direct Web Access to OS/390 Data Sets</b>	\$ 20.00	
<i>Unlimited number of Web pages ("@WWW" data sets)</i>		
<i>stored under an account/initials combination (per month)</i>		
<i>plus normal data set charges</i>		



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## Plans for Unattended Sunday Service Are Being Reviewed

CIT has not begun the pilot program to streamline operator coverage at the NIH Computer Center on Sundays. In light of the heightened awareness of security throughout the federal government, we are reviewing our initial plans for unattended Sunday service. Further developments will be announced in a future issue of *Interface*.



## Reminder—A New Way to Order CIT Publications

CIT has a convenient system for getting copies of CIT documentation—the “View/Print on Demand” (View/Print) system. This new system allows four ways to view documentation:

- view it online (as a PDF)
- print it on your local printer
- send it on the central printers  
(if you have a South system account/initials combination or a Unix username/login)
- order a hardcopy version online

The automatic documentation renewal system has been replaced by a Listserv list, “CIT-Doc-Renew” [<http://list.nih.gov/archives/cit-doc-renew.html>]. Join the list to receive e-mail notice of updates. (See the article in *Interface* 219 (June 25, 2001).



## Documentation Available—Titan and EOS *User's Guides*

### New—Titan User's Guide

The OS/390 *Titan User's Guide* is now available as a “starting point” for Titan users and a preview of things to come for South system users. Copies are available via the CIT publications page [<http://publications.cit.nih.gov>]—use the link to NIH Computer Center User's Guides. This *User's Guide* includes information on:

- 
- registration procedures
  - charging
  - security
  - support for users
  - connectivity
  - systems and applications software
  - printing services
  - batch services
  - storage and backup
  - hardware facilities

To stay up-to-date, CIT strongly recommends that OS/390 users subscribe to two online newsletters via the NIH Listserv – “CIT-Titan-News” [<http://list.nih.gov/archives/cit-titan-news.html>] and “Interface” [<http://list.nih.gov/archives/interface.html>]. Subscribers to these two lists will be notified by e-mail when new issues are on the Web.

## Updated – EOS User’s Guide

The updated *Enterprise Open Systems User’s Guide* (September 2001) is now available. You can view this guide online, print off a PDF copy, or order a hard copy from the CIT publications Web page [<http://publications.cit.nih.gov>] – use the link to NIH Computer Center User’s Guides.

EOS – a Unix-based platform at CIT’s NIH Computer Center – currently hosts a variety of production and development applications. EOS provides a stable, robust environment for enterprise-wide database systems and offers top-end client/server hardware and software – featuring powerful Compaq/Digital AlphaServers, Sun Servers, Oracle RDBMSs, and complete Web capabilities that can access data on different platforms. Use of EOS is on a fee-for-service basis, with the costs charged to your CIT account.

For more information, call TASC.



## “Ask TASC”—About Spam E-Mail

TASC receives many calls each day from customers who are experiencing similar problems. In each issue of *Interface*, we will present some frequently asked questions and answers, as well as tips. We hope you find this information helpful.

### **Q: What does the acronym SPAM stand for?**

A: Nothing. Spam is not an acronym. Interestingly enough, the term was in all probability derived from a Monty Python Flying Circus comedy sketch in which the participants incessantly repeated the word “spam” ad nauseam. The association was thus born between the word spam and this type of e-mail – since both were seemingly limitless, unstoppable and, above all else, extremely annoying.

### **Q: What is “spam” e-mail?**

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A: Spam is “Unsolicited e-mail, often of a commercial nature, sent indiscriminately to multiple mailing lists, individuals, or newsgroups; junk e-mail.” *The American Heritage Dictionary of the English Language* (Fourth Edition).

**Q: Can I stop spam E-mail?**

A: Mail server administrators do not typically filter or block spam. You can, however, filter mail through your mail client. For example, the Microsoft Outlook client offers a Rules Wizard that will specifically deal with “Junk E-mail.”

In Outlook, go to the “Tools” menu, click “Rules Wizard,” and then click “New.” A new “rule” will begin construction at this point—just follow the instructions:

- Which type of rule do you want to create?  
Select **Check messages when they arrive**, then click the “Next” button.
- Which condition(s) do you want to check?  
Select **suspected to be junk e-mail or from Junk Senders**, then click the “Next” button.
- What do you want to do with the message?  
Most people click the box **permanently delete it**, and  
also click **move it to the specified folder** (such as, “Deleted Items”).  
A double-click on “specified” at the bottom allows you to choose a folder to receive such e-mail.

Your selections are visible at the bottom of the Wizard under “Rule Description,” where you can edit your selections. Click the “Finish” button to complete the rule, and then click OK to get out of the Rules Wizard.

You can apply your rule to any e-mail from an annoying spam sender—simply highlight the message in your Inbox, click on the “Actions” menu, click Junk E-mail, and then click on “Add to Junk Senders List.” That particular sender’s mail will now be filtered according to the rule you just set up.

**Q: Can’t I simply unsubscribe to a spam e-mail sender?**

A: This is not advised. Replying to a “spammer” may actually have the opposite effect. By sending a message back to the sender, this confirms to the spammer that your e-mail address is valid and that you read your e-mail. This can make you an even bigger target for spam.

For further information, please visit the NIH Web page on unwanted e-mail and spam [<http://irm.cit.nih.gov/security/spam.htm>].

If you have any questions please call TASC, and a consultant will be happy to help you.

We welcome your ideas about topics in future editions of “Ask TASC.” Please send suggestions to [TASC@mail.nih.gov](mailto:TASC@mail.nih.gov).



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## NIH Computer Center—Holiday Service Schedule

### TASC Help Desk

TASC—whose normal hours are 7:00 A.M. to 6:00 P.M.—will be open fewer hours during the coming holidays (changes are in **bold** type). The holiday schedule is posted on the new Customer Support Web page [<http://support.cit.nih.gov>]—see the separate article in this issue.

#### *Christmas*

Monday	December 24	<b>Closed</b>
Tuesday	December 25	<b>Closed</b>
Wednesday-Friday	December 26-28	<b>8:00 A.M. to 4:30 P.M.</b>

#### *New Years*

Monday	December 31	7:00 A.M. to <b>2:00 P.M.</b>
Tuesday	January 1, 2002	<b>Closed</b>
Wednesday	January 2	7:00 A.M. to 6:00 P.M. (regular schedule)

### ALW, EOS, Helix, Titan and South Systems

#### *Christmas*

Monday	December 24	<b>Unattended service after 6 P.M.</b>
Tuesday	December 25	<b>Unattended service</b>

#### *New Years*

Monday	December 31	<b>Unattended service after 8 P.M.</b>
Tuesday	January 1, 2002	<b>Unattended service</b>

Changes in this schedule will be communicated through the “message” facilities of interactive systems. For details, please refer to <http://silk.nih.gov/public.unattend.service>.



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## CIT Computer Training Program—Fall Term Is Underway

Registration is still open for the CIT Training Program's fall term of computer classes, which runs through January 2002. The term includes several new topics. Highlights include new interest groups for account sponsors and desktop support staff, a newly equipped wireless classroom, and a substantial number of new scientific offerings.

### **New Interest Groups**

Account sponsors and alternates have quite a number of resources available. The new Account Sponsors Interest Group will meet regularly to provide a forum for discussions about sponsor or deregistration roles, responsibilities, as well as Web Sponsor. "Account Sponsor Orientation" classes are also available for both the South and Titan systems.

For people doing desktop support at NIH, an exciting new resource is available. A users' group for desktop support meets regularly to exchange information and to keep staff up-to-date on desktop support issues. The meeting at the end of November will address "Issues in Wireless Support." The training program's new wireless classroom will be used, and the group will examine many of the questions that can arise in maintaining users on a wireless network.

### **New Courses Being Offered**

We are particularly pleased with the number of new scientific courses available. CIT's Dr. Susan Chacko will present "Making Movies of Molecules," in which she will demonstrate the use of Web-available and other software to make movies in various formats, and will discuss the pros and cons of the different approaches.

Other new scientific courses include "Analysis of Kinetics Data," "mAdb Basic Informatics," "Simplifying Diffusion Calculations Where There Is Radial Symmetry," and "Tools for Genome Analysis."

A new collaboration between the CIT training program and the NIH Library brings classes on EndNotes 5, software that helps scientists manage references by creating libraries of references and formatting them to hundreds of journal styles.

Microsoft is offering a number of new courses that reflect new developments in their software—"Microsoft SharePoint Portal Server 2001," "Microsoft Content Management," and "Microsoft Visual Studio.Net."

### **You Asked, We Answered**

The training program is now offering several new courses after numerous requests from users. Two classes have been added for people developing Web pages—"Introduction to Active Server Pages" and "Introduction to Cascading Style Sheets." These classes will take users beyond HTML into further options for Web page design.

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Current FileMaker Pro users can acquire more advanced skills in “Intermediate FileMaker Pro 5 for the Mac,” including how to create and use databases for organizing information.

## **Registration**

Classes are available free-of-charge to NIH employees and other users of NIH computing facilities. The courses are offered to help individuals become more efficient and effective in their use of computing, networking, and information systems at NIH.

You can obtain full course information or register for classes online at the CIT training Web page [<http://training.cit.nih.gov>]. You are always welcome to give us a call at TASC if you wish to discuss course registration, teaching a class, or other training issues.



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## Training Calendar—Fall 2001

### December

639	Introduction to Cascading Style Sheets	12/17
190	DWQuery: Human Resources Fellowship Payment	12/17
972C	mAdb Basic Informatics	12/18
366	An Introduction to TCP/IP	12/18
186B	DWQuery: Travel	12/18
987	Using Vector NTI Suite in the Molecular Biology Laboratory	12/18
824D	PowerPoint Topics: Graphs, Links and More	12/18
862	Microsoft Visual Studio 6.0	12/19
337	Oracle SQL Plus	12/19
195B	DWQuery: Staff Training & Development	12/19
637D	Introduction to HTML	12/20

### January

822C	PowerPoint 2001 for the Mac	1/3
930	Hands-On EndNote 5 for Windows	1/7
668	Java GUI Programming	1/8
654	Microsoft SharePoint Portal Server 2001	1/8
675	WIG - World Wide Web Interest Group	1/8
400C	Fundamentals of Unix	1/8 - 1/10
946	Making Movies of Molecules	1/9
823E	Creating Presentations with PowerPoint 2000	1/9
944	Creating Composite Images with Photoshop	1/11
254	Elementary S-Plus	1/11
875	Intermediate FileMaker Pro 5 for the Mac	1/14
991	Advanced Sequence Analysis Using the Wisconsin Package (GCG)	1/14 - 1/15
972D	mAdb Basic Informatics	1/15
871	Macintosh OS X - What's New for Users	1/16
824E	PowerPoint Topics: Graphs, Links and More	1/16
823F	Creating Presentations with PowerPoint 2000	1/17
980	Tools for Genome Analysis	1/17
637E	Introduction to HTML	1/18
903C	Avoiding Pitfalls in Statistical Analysis	1/18
877	BRMUG - Macintosh Users Group	1/22



# Dates to Remember

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## Now . . .

- CIT now offers Web-based customer support around the clock (24 x 7).
- Interest groups are now available for account sponsors and desktop support.
- Web Sponsor now allows multiple alternate sponsors. S
- "Off-hours" discount will be reduced in fiscal year 2002. [See issues 218, 220.] S
- Enhancements to SRT system are now in effect. [See issue 220] S T
- Prices for processing microfiche have changed. [See issue 220] S T
- Updated *EOS User's Guide* is available. E
- First *Titan User's Guide* has been published. T
- RACFREG has been replaced by Titan's Web Sponsor. N T

## Holiday Service Schedule . . .

December 24	Unattended service at the NIH Computer Center after 6 P.M. E S T W
December 24	TASC closed.
December 25	Unattended service at the NIH Computer Center. E S T W
December 25	TASC closed.
December 26-28	TASC open between 8 A.M. and 4:30 P.M.
December 31	Unattended service at the NIH Computer Center after 8 P.M. E S T W
December 31	TASC closes at 2 P.M.
January 1	Unattended service at the NIH Computer Center. E S T W
January 1	TASC closed.

## 2002 . . .

March 27	Disaster recovery test. E S T
November 13	Disaster recovery test. E S T

E	EOS System
N	OS/390 North System (turned off July 31, 2001)
S	OS/390 South System
T	OS/390 Titan System
W	Windows NT/2000

Articles in other issues of *Interface* appear in brackets [ ].



# *Publications*

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The following documents have become available since the last issue of Interface. Automatic renewal of publications has been replaced by the “View / Print on Demand” (VPOD) system available online [<http://publications.cit.nih.gov>]. To be notified of new or updated documentation that has been added to the VPOD system, join the Listserv list, “CIT-doc-renew” [<http://list.nih.gov/archives/cit-doc-renew.html>].

## **Mainframe Systems (IBM OS/390 Servers)**

### **Single Copy Publications**

#### *New*

Titan User’s Guide (October 2001)

## **Enterprise Open Systems (Unix Servers)**

### **Single Copy Publications**

#### *Updated*

EOS User’s Guide (September 2001)



# Popular Web Sites

Service	Web Address
<b>National Institutes of Health</b>	<a href="http://www.nih.gov">http://www.nih.gov</a>
Antivirus Web site	<a href="http://antivirus.nih.gov">http://antivirus.nih.gov</a>
NIH Electronic Directory	<a href="http://nedinfo.nih.gov">http://nedinfo.nih.gov</a>
NIH Data Warehouse	<a href="http://datatown.nih.gov">http://datatown.nih.gov</a>
Software Distribution Project	<a href="http://sdp.cit.nih.gov">http://sdp.cit.nih.gov</a>
Center for Information Technology	<a href="http://cit.nih.gov">http://cit.nih.gov</a>
Computational Bioscience	
Molecular Modeling	<a href="http://cmm.info.nih.gov/modeling">http://cmm.info.nih.gov/modeling</a>
NIH Computer Center Systems	<a href="http://datacenter.cit.nih.gov">http://datacenter.cit.nih.gov</a>
ALW	<a href="http://www.alw.nih.gov">http://www.alw.nih.gov</a>
Helix Systems	<a href="http://helix.nih.gov">http://helix.nih.gov</a>
NIH Biowulf Cluster	<a href="http://biowulf.nih.gov">http://biowulf.nih.gov</a>
Enterprise Systems	<a href="http://datacenter.cit.nih.gov/enterprise.html">http://datacenter.cit.nih.gov/enterprise.html</a>
OS/390	<a href="http://titan.nih.gov/">http://titan.nih.gov/</a>
Problem Reporting	<a href="http://datacenter.cit.nih.gov/srt">http://datacenter.cit.nih.gov/srt</a>
• <i>Titan</i>	
SILK Web	<a href="http://titan.nih.gov/">http://titan.nih.gov/</a>
Transition Update	<a href="http://silk.nih.gov/silk/titan">http://silk.nih.gov/silk/titan</a>
Web Sponsor	<a href="http://websponsor.cit.nih.gov">http://websponsor.cit.nih.gov</a>
• <i>South</i>	<a href="http://datacenter.cit.nih.gov/mvs">http://datacenter.cit.nih.gov/mvs</a>
RACF	<a href="http://silk.nih.gov/racf">http://silk.nih.gov/racf</a>
SILK Web	<a href="http://silk.nih.gov">http://silk.nih.gov</a>
Database Technologies	<a href="http://silk.nih.gov/dbtech">http://silk.nih.gov/dbtech</a>
Web Sponsor	<a href="http://silk.nih.gov/sponsor/homepage">http://silk.nih.gov/sponsor/homepage</a>
<i>Enterprise Open System (EOS)</i>	<a href="http://datacenter.cit.nih.gov/eos">http://datacenter.cit.nih.gov/eos</a>
Application Service Request	<a href="http://silk.nih.gov/asr/request">http://silk.nih.gov/asr/request</a>
<i>NT Applications Servers</i>	<a href="http://datacenter.cit.nih.gov/nt">http://datacenter.cit.nih.gov/nt</a>
Application Service Request	<a href="http://silk.nih.gov/asr/request">http://silk.nih.gov/asr/request</a>
NIH Backup and Recovery Service	<a href="http://silk.nih.gov/silk/nbars">http://silk.nih.gov/silk/nbars</a>
Oracle License Information	<a href="http://silk.nih.gov/silk/oracle">http://silk.nih.gov/silk/oracle</a>
Oracle Database Servers	<a href="http://silk.nih.gov/silk/citoracle">http://silk.nih.gov/silk/citoracle</a>
<b>Customer Services</b>	
Accounts	<a href="http://support.cit.nih.gov/accounts">http://support.cit.nih.gov/accounts</a>
Customer Support	<a href="http://support.cit.nih.gov">http://support.cit.nih.gov</a>
Publications	<a href="http://publications.cit.nih.gov">http://publications.cit.nih.gov</a>
TASC	<a href="http://support.cit.nih.gov">http://support.cit.nih.gov</a>
Training	<a href="http://training.cit.nih.gov">http://training.cit.nih.gov</a>
<b>Network Systems</b>	
LISTSERV	<a href="http://list.nih.gov">http://list.nih.gov</a>
NIHnet	<a href="http://www.net.nih.gov">http://www.net.nih.gov</a>
Parachute	<a href="http://parachute.nih.gov">http://parachute.nih.gov</a>

# NIH COMPUTER CENTER Hardware and Software

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## ENTERPRISE SYSTEMS

### OS/390 (MVS) SYSTEMS

#### OS/390 Systems Hardware

The OS/390 facility is an integrated multiprocessor complex, interconnected by shared disk storage. There are two IBM 9672 model RB6 systems, each with 2 processors. Each system has two gigabytes (GB) of memory and a complement of several hundred peripheral devices.

The peripheral devices include:

- ILK 3762 Ethernet interface for TCP/IP
- 9392 disk drives (RAMAC)
- 3480 cartridge tape drives (18 track, 38,000 BPI)
- 3490E cartridge tape drives (36 track, 38,000 BPI)
- 3494 automated tape library (ATL)
- 3422 tape drives (6250/1600 BPI)
- STK 9310 (Powderhorn ) ATL
- STK 9490 (Timberline) cartridge tape drives (36 track, 38,000 BPI)
- STK virtual tape storage subsystem (VTSS)
- STK 9840 ultra high performance magnetic tape drives
- 3990 DASD Cache Storage Controllers
- 9390 DASD Cache Storage Controllers
- 3900 laser printing subsystems
- 3160 cut-sheet laser printers
- 4245 impact printers
- 3172 channel to Ethernet interface
- 3745 communications controllers
- 5665 NCR communications controllers

Peripherals are available to all processors, providing nonidle redundancy and minimal disruption of service in the event of any subsystem or component failure.

#### IBM 9672-RB6 Serial Numbers

CP0=044625, CP1=144625  
CP0=044626, CP1=144626

### OS/390 Systems Software

S = South System, T =Titan

#### OS/390 Operating System

The IBM OS/390 Operating System using job control language as the user interface and the Job Entry Subsystem Version 2 (JES2), (S, T). A Unix-based component of OS/390 is installed (S, T).

#### SILK Web Facilities

Customized, public, and secure servers available for general use. SILK provides online services that include: directory and account information, management functions, RACF processing, data set listing, batch job submission, and e-mail through a Web interface (S, T).

#### Interactive Systems

CICS (T), ISPF (S, T), TSO (S, T), NIH Extended WYLBUR (S), and ACS WYLBUR (T)

#### Databases

ADABAS (T), Model 204 (T), DB2 (S), and IMS (S)

#### Language Processors

COBOL/370 (S, T), VS FORTRAN (S, T), PL/I for OS and VM (S, T), REXX (S, T), High Level Assembler (S, T)

#### Graphics Systems

SAS/GRAPH (T)

#### Scientific Statistical Systems

SAS (S, T), SPSS (S, T)

#### Other

File management systems - VISION:Builder (S, T), VISION:Report (S, T), IRS (T); BookManager online documentation system (T); CONNECT:Direct for online financial transactions (S, T); VPS printing service (S, T)

#### Connectivity Products for Access to the OS/390 Systems

Terminal emulation and full connectivity client software for telnet and dialup connections. Supported software packages include MS-Kermit (S), QWS3270 PLUS (S, T), NetTerm (TNVT) (S), and WS\_FTP Pro (S, T).

# *NIH COMPUTER CENTER Hardware and Software*

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## **EOS (UNIX)**

### **Unix System Hardware**

Compaq AlphaServer GS60  
4 CPUs (500 MHz EV6)  
4 GB RAM

Compaq/Digital AlphaServer GS140  
10 CPUs (440 MHz)  
8 GB RAM

Numerous Compaq/Digital AlphaServers: 1000s, 1200s, 2100s, and a 4100

Sun Enterprise 250 and 420-R servers

### **Unix System Software**

*Tru64 UNIX Operating System*

*Sun Solaris Operating System*

*Installed Software (commercial)*

DEC COBOL

DEC C

DEC C++

Netscape Enterprise Server

Oracle Web Application Server

*Database*

Oracle

## **WINDOWS NT/2000 APPLICATION SERVERS**

Windows NT and Windows 2000 applications can be hosted on a series of servers that are carefully managed and monitored by CIT on a 7x24 basis. These are Compaq Enterprise class servers and storage arrays. This facility provides a computing environment that has been proven suitable for mission-critical, enterprise-wide applications.

### **Hardware**

Compaq DL360  
Dual- Intel Pentium III 800MHz Processors  
512MB SDRAM expandable to 4 GB  
Storage: 2 Internal Drives - 9.1, 18.2, or 36GB - large storage arrays available  
Size: 1U

Compaq DL380  
Dual - Intel Pentium III 933MHz Processors  
512MB SDRAM expandable to 4 GB

Storage: 4 - 6 Internal Drives - 9.1, 18.2, or 36GB - large storage arrays available

Size: 3U

Compaq DL580  
Quad - Intel Pentium III 700MHz/2MB Xeon Processors  
1GB SDRAM expandable to 16 GB  
Storage: 4 Internal Drives - 9.1, 18.2, or 36GB - large storage arrays available  
Size: 4U

Compaq 8500  
An 8 way (8 processor) - Intel Pentium III 700MHz/2MB Xeon Processors  
2GB SDRAM expandable to 16 GB  
Storage: 4 Internal Drives - 9.1, 18.2, or 36GB - large storage arrays available  
Size: 7U

## **Windows Application Software**

*NT 4.0 Server is our standard operating system, with Windows 2000 service in the near future.*

*Major components of the Microsoft BackOffice Suite of applications, with services such as Terminal Server, SQL Server, Exchange, and IIS, are supported in an enterprise-wide environment.*

*Other user specified and support software including:*

NBARS—automatic backup/recovery services for distributed file servers

## **OTHER SERVICES**

Oracle server software for use on several platforms with concurrent Oracle usage rights.

Site license agreements for distributing SAS for PC clients.

Central Email Service (CES) provides e-mail services for the NIH community.

NBARS, an OS/390-based service using TSM software, provides backup and recovery for distributed data.

The Disaster Recovery Program provides disaster recovery facilities and services for "critical" applications that run on the OS/390 systems and the EOS system.

# NIH COMPUTER CENTER Hardware and Software

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## HELIX SYSTEMS

<http://helix.nih.gov>

The NIH Helix Systems manage high-performance computing systems for the NIH intramural scientific community. The staff provides training, documentation and consulting for the resources on these systems. The front-end SGI Origin 2000 system (with the network name [helix.nih.gov](http://helix.nih.gov)) is used for many scientific applications as well as general purpose tasks, such as reading mail, transferring files and web browsing.

Additional systems offer special computational capabilities that enable compute-intensive scientific applications to run faster or more efficiently. An SGI Origin 2400 ([nimbus.nih.gov](http://nimbus.nih.gov)) augments helix by running specific scientific applications or user programs that require long execution times. The NIH Biowulf Cluster ([biowulf.nih.gov](http://biowulf.nih.gov)) is a Beowulf parallel processing system that currently has 488 processors. Biowulf was built by members of the Helix Systems staff and runs the Redhat Linux operating system. A pair of SGI Origin 2000s with 48 processors between them (galaxy/quasar) are designed for the development and execution of high performance parallel applications. The SGI systems run the IRIX operating system, and are jointly funded by the Division of Computer System Services (DCSS) and the Division of Computational Bioscience (DCB).

### Helix Systems Software

<http://helix.nih.gov/apps>

In addition to the standard Unix tools for software development, text formatting, and network communications, software packages include:

#### *Scientific Applications*

BioInformatics: GCG, Fasta, Blast, ClustalW, sequence format converters, BoxShade  
Structural Biology: X-Plor, Quest, Gaussian, Charmm  
Molecular Modeling: AMBER, Charmm, DOCK, Fdiscover, LOOK, Insight, NAOMI, Sybyl. Available on helix through MMIGNET  
Mathematical/Graphical Analysis: Mathematica, MATLAB, S-PLUS, IMSL, xmgr, Xplot  
Image Analysis: Analyze, AnalyzeAVW, AVS, IDL, xv, imgworks, convert, GIMP, GPHIGS, PHIGURE  
Molecular Graphics: Grasp, Molscript, Molauto, PovChem, Povscript, PovRay, Ribbons

#### *Biological Databases*

GenBank: nucleic acid sequences  
PIR: protein sequences  
Genpept: protein translations from Genbank  
SwissProt: curated and highly annotated protein sequence database  
PDB: protein structures  
Cambridge Structural Database: small organic and organometallic molecules

#### *Programming Language/Tools*

C, FORTRAN 77, Fortran 90, Lisp, gcc, C++, and other typical Unix tools like awk and perl  
Vector compilers, MPI library, batch systems  
Static analyzer, debugger, and performance analyzer tools

#### *Subroutine Libraries*

IMSL: mathematical and statistical routines  
FIGARO: 2- and 3-d interactive graphics routines

#### *Network Services*

mail, pine, and Emacs rmail: e-mail readers  
ftp: Internet file transfer utility  
Kermit: file transfer via modem  
X Window System: supports X-windows scientific applications such as S-PLUS, Mathematica, MATLAB, SeqLab.  
Netscape and lynx: web browsers  
Tin, rn, xrn: newsgroup reader  
WebTermX: Web browser plug-in that lets Windows PCs run the X Window System  
eXodus: X Windows System for Macintosh

#### *Editors*

Pico, vi, edt, nedit, xedit, and GNU Emacs: full-screen editors  
ed and ex: line editors

### Web-based Services

<http://helix.nih.gov/webapps>

Xwindows: Graphics applications run on helix can be displayed on a desktop Mac or PC

Scientific applications: GCG-Lite, Molecules'R'Us, SeqWeb, and other web interfaces to scientific tools

Literature Searching: Web of Science, a citation-oriented database of scientific literature. Contains the Science Citation Index Expanded and the Social Science Citation Index Expanded

Porpoise: automatic alert service for new scientific literature that searches the weekly updates of the Web of Science

WHALES: automatic alert service for new sequences in the major nucleotide and protein databases  
NIH Directory and Email Forwarding Service

### Helix Systems Hardware

The SGI Origin 2000 system (helix) consists of 8 processors based on the MIPS R12000 chip. Each CPU has shared access to 2 GB of memory.

The SGI Origin 2400 (nimbus) consists of 8 processors based on the MIPS R12000 chip. Each CPU has shared access to 4 GB of memory and 20 GB of swap space.

The 32-processor Origin (galaxy) utilizes MIPS R10000 processors and has a total of 8 GB of system memory. The 16-processor Origin (quasar) utilizes MIPS R12000 processors and has a total of 4 GB of system memory.

# NIH COMPUTER CENTER Hardware and Software

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The Biowulf cluster consists of 488 dual-processor Pentium 450 MHz, 550 MHz and 866 MHz nodes, most with 512 MB of memory and 8 GB of disk. Each node is connected to a fast Ethernet switch (100 Mb/s). For applications that can take advantage of

more memory and higher network speeds, some nodes contain as much as 2 GB of memory and others are connected to a gigabit speed network.

The Helix systems are restricted to NIH use.

## ALW SYSTEM

<http://www.alw.nih.gov>

The Advanced Laboratory Workstation (ALW) System is a general-purpose, open, distributed computing system. All Advanced Laboratory Workstations are interconnected by the NIH campus-wide network, which they use to share resources and access services. The AFS file system provides distributed file services.

### ALW System Hardware

#### *Client workstations*

Sun SPARCstations  
Silicon Graphics

#### *File Servers*

5 servers with combined storage of over 300 GB

### ALW Application Software

#### *Genomic sequence analysis packages*

Refer to <http://www-bimas.cit.nih.gov/>

#### *Image processing*

Analyze - medical image processing  
Khoros - abstract visual language  
MEDX - medical imaging processing

#### *Mathematics packages*

Mathematica  
Matlab

#### *Molecular modeling software*

Refer to <http://cmm.info.nih.gov/modeling>

#### *Statistical packages*

Prophet  
SAS  
S-PLUS

#### *Office automation applications*

StarOffice - integrated spreadsheet, word processing and graphics  
FrameMaker - desktop publishing  
WordPerfect - word processing

#### *Other software*

Emacs - text editor  
Gnu software and development tools  
Internet Explorer - web browser  
Netscape - web browser  
PTR - problem reporting system for ALW  
Softwindows95 - Windows95 emulator

## NETWORKS

### *NIHnet*

a high-speed network backbone that interconnects NIH LANs, the Computer Center central servers—enterprise (OS/390, Open Systems, and Windows NT/2000 Application Servers) and scientific (Helix and ALW Systems)—and the Internet. The LAN protocols that are supported for NIHnet connectivity include TCP/IP, AppleTalk, and IPX. Users on NIHnet LANs with these protocols are provided with remote login and high-speed access, fast file transfer, and local and worldwide electronic mail connections. Dialup access to NIHnet is available through Parachute.

### *Internet*

an international collection of networks, supported by major research institutions, that communicate with each other using TCP/IP protocols. The Internet offers file transfer, remote login (telnet) electronic mail, and World Wide Web connections.

### *NIHnet Mail Gateway*

a set of gateways, allowing the exchange of electronic mail among users of all mail systems supported at NIH and between NIH users and other users on the Internet. (Note: not all mail systems support the exchange of attachments).

# Computer Services Telephone Directory

Service	Office	Bldg/Rm	Telephone (301)
<b>ENTERPRISE SYSTEMS (OS/390), Unix, Windows NT/2000 Servers)</b>			
Database Support	Database Systems Branch	12/2200	496-9158
IMS Support	Database Systems Branch	12/2200	496-6244
Help Desk	TASC	12A/1011	594-6248
New Applications	Application Services Branch	12A/4011	496-5524
Operating Schedule – OS/390 (recording)	--	--	402-2211
Security Investigations and Assistance	TASC	12A/1011	594-6248
Fax Number	--	--	496-6905
Security Policy	CIT Security Coordinator	12A/4033	496-1053
Tape Library	Systems Operations Mgmt. Branch	12/1100	496-6021
<b>SCIENTIFIC SYSTEMS (Helix and Advanced Laboratory Workstation)</b>			
Help Desk - ALW**	TASC	12A/1011	594-6248
Help Desk - Helix	TASC	12A/1011	594-6248
Operating Schedule – Helix, EOS (recording)	--	--	402-2212
Operator - Helix	--	12/2200	496-6755
<b>CONNECTIVITY SERVICES (E-mail, Networks, File Transfer, Access to Enterprise and Scientific Systems)</b>			
Help Desk	TASC	12A/1011	594-6248
<b>GENERAL SERVICES</b>			
Accounts/Billing, Registration	TASC	12A/1011	594-6248
ADB Support**	TASC	12A/1011	594-6248
Application Programming**	Division of Enterprise and Custom Applications	Federal Bldg.	594-6248
Computer Center General Policy	Director, Division of Computer System Services	12A/4039	496-5381
Computer Center Security Policy	CIT Security Coordinator	12A/4033	496-1053
Disaster Recovery Process	Disaster Recovery Coordinator	12A/4033	496-1053
Documentation/Publications	Technical Information Office	12A/1011	594-6248
Output Distribution and Foreign Tape Handling			
NIH Campus	Output Distribution	12A/1000	496-6183
Parklawn Building	Output Distribution	2B70	443-4253
Public Information on CIT	Information Office, CIT	12A/4063	496-6203
Special Tape Handling	Output Distribution	12A/1000	496-6183
Statistical Packages	TASC	12A/1011	594-6248
TDD Line for Hearing Impaired	TASC	12A/1011	496-8294
Telecommunications Problems	TASC	12A/1011	594-6248
Training	TASC	12A/1011	594-6248

\*Non-NIH number; requires "9" prefix. \*\*Services available to NIH employees only.

**World Wide Web access to CIT through <http://cit.nih.gov>**

TASC (Technical Assistance and Support Center) is open 8:00 A.M. - 5:00 P.M.

# Online Services Directory

Service	Internet Host Name	Dialup Access (301)	Status (301)
<b>OS/390 (MVS) - South System</b>			
WYLBUR (network) 2400-19200 bps (dialup)	WYLBUR.CU.NIH.GOV	402-2221 *800-358-2221	402-2211
TSO (network) 2400-19200 bps (dialup)	TSO.CU.NIH.GOV	402-2223 *800-358-2223	402-2211
TSO, DB2, IMS (Full-Screen 3270) (network) 2400-9600 bps (dialup)	TN3270.CU.NIH.GOV		402-2211
IBM Batch (RJE Batch) 2400-9600 bps	N/A	402-2227 402-2228	402-2211
Network File Transfer	FTP.CU.NIH.GOV	N/A	N/A
<b>OS/390 (MVS) - Titan (Standard System)</b>			
TSO (Full-Screen 3270)	TN3270.TITAN.NIH.GOV	N/A	402-2211
RJE Batch 2400-9600 bps (dialup)	N/A	480-0744	402-2211
Full-Screen 3270 2400-9600 bps (dialup)	N/A	480-0748	402-2211
Network File Transfer	FTP.TITAN.NIH.GOV	N/A	402-2211
<b>EOS (Unix)</b>			
Compaq/Digital AlphaServers	EOS.NIH.GOV	N/A	402-2212
<b>Helix Systems</b>			
SGI Challenge System 2400-33600 bps	HELIX.NIH.GOV	402-2222 *800-358-2022	402-2212
NIH Biowulf Cluster	BIOWULF.NIH.GOV	N/A	402-2212
<b>NIHnet access through Parachute</b>	N/A	402-6830 *800-827-0124	594-6248

## NOTES

- To access 402, 435, 443, 451, 480, 496, 594, or 827 numbers from other 402, 435, 443, 451, 480, 496, 594, or 827 numbers, use only the last 5 digits.
- N/A: Not Applicable
- All telephone numbers are accessible through FTS.

\* These 800 numbers should be used only by persons who do not have access to FTS2001.

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DCS	Division of Customer Service
DCSS	Division of Computer System Services
OD/OPEC	CIT, Office of Planning, Evaluation, and Communication
NIH/OD	NIH Business Systems, Executive Office